



## Climate change and vector-borne diseases: An economic impact analysis of malaria in Africa

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### Abstract:

A semi-parametric econometric model is used to study the relationship between malaria cases and climatic factors in 25 African countries. Results show that a marginal change in temperature and precipitation levels would lead to a significant change in the number of malaria cases for most countries by the end of the century. Consistent with the existing biophysical malaria model results, the projected effects of climate change are mixed. Our model projects that some countries will see an increase in malaria cases but others will see a decrease. We estimate projected malaria inpatient and outpatient treatment costs as a proportion of annual 2000 health expenditures per 1,000 people. We found that even under minimal climate change scenario, some countries may see their inpatient treatment cost of malaria increase more than 20%.

**Source:** <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3083677>

### Resource Description

#### Climate Scenario :

specification of climate scenario (set of assumptions about future states related to climate)

Special Report on Emissions Scenarios (SRES)

**Special Report on Emissions Scenarios (SRES) Scenario:** SRES A1

#### Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

#### Exposure :

weather or climate related pathway by which climate change affects health

Meteorological Factors, Precipitation, Temperature

**Temperature:** Fluctuations

#### Geographic Feature:

# Climate Change and Human Health Literature Portal

resource focuses on specific type of geography

None or Unspecified

## **Geographic Location:**

resource focuses on specific location

Non-United States

**Non-United States:** Africa

## **Health Impact:**

specification of health effect or disease related to climate change exposure

Infectious Disease

**Infectious Disease:** Vectorborne Disease

**Vectorborne Disease:** Mosquito-borne Disease

**Mosquito-borne Disease:** Malaria

## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation

## **Model/Methodology:**

type of model used or methodology development is a focus of resource

Cost/Economic

## **Resource Type:**

format or standard characteristic of resource

Research Article

## **Timescale:**

time period studied

Long-Term (>50 years)

## **Vulnerability/Impact Assessment:**

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

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